AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated in the following listing of all claims:

1. (Currently Amended)   A method comprising:
evaluating one or more characteristics associated with one or more signals sent by a
remote communication device to a local communication device, the signals being
sent according to a communication protocol allowing variability in the one or
more characteristics, the one or more characteristics ~~differing between~~ varying for
at least some implementations of the communication protocol; and
comparing the evaluated one or more characteristics to characteristics of signals sent by
known devices.

2. (Original)   The method as recited in claim 1 further comprising determining an
identity of the remote communication device based on the comparing of the evaluated one or
more characteristics.

3. (Original)   The method as recited in claim 2 wherein the identity of the remote
communication device is determined according to at least one of brand, type or model.

4. (Original)   The method as recited in claim 1 wherein the evaluating occurs during a
training phase establishing properties of a communication medium coupling the remote
communication device to the local communication device.

5. (Original)   The method as recited in claim 1 further comprising enabling a
communication feature according to the comparing of the evaluated one or more characteristics
to thereby better communicate with the remote communication device.

6. (Original)   The method as recited in claim 5 wherein the remote communication
device is a digital modem and the communication feature is a request for spectral shaping by an
analog modem.

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7. (Currently amended) The method as recited in claim 1 wherein the remote communication device includes one of a digital modem and analog modem.

8. (Original) The method as recited in claim 1 wherein the evaluating is performed in a first communication device operating as a modem in accordance with ITU-T Recommendation V.90.

9. (Original) The method as recited in claim 1 further comprising enabling one or more performance enhancing or deficiency compensation features according to the comparing of the evaluated one or more characteristics.

10. (Original) The method as recited in claim 1 wherein the local communication device performs the evaluating by measuring a duration of one or more training signals, duration of the one or more training signals being the one or more characteristics of the one or more signals sent by the remote communication device.

11. (Original) The method as recited in claim 10 wherein the training signals are modem training signals TRN_{1d} and TRN_{2d} and the duration of the modem training signals are measured and wherein during the comparing, the measured duration is compared to stored duration values to identify the remote communication device.

12. (Original) The method as recited in claim 10 wherein the duration is measured in terms of a number of symbols transmitted.

13. (Currently amended) An apparatus comprising:
    means for evaluating one or more characteristics associated with one or more signals sent
        by a remote communication device coupled to the apparatus, wherein the one or
        more signals are sent according to a communication protocol allowing variability
        in the one or more characteristics; and
    means for comparing the evaluated one or more characteristics to known characteristics
        to determine an identity of the remote communication device.

14. (Original) The apparatus as recited in claim 13 further comprising means for enabling one or more performance enhancing features according to the identification of the remote communication device.

15. (Original) The apparatus as recited in claim 13 further comprising means for enabling one or more deficiency compensation features according to the identification of the remote communication device.

16. (Currently amended) A computer program product encoded in at least one computer readable medium, comprising:

    a first instruction sequence executable to evaluate one or more characteristics associated with signals sent by a remote communication device, wherein the one or more signals are sent according to a communication protocol allowing variability in the one or more characteristics; and

    a second instruction sequence executable to compare the evaluated one or more characteristics to stored characteristics of known communication devices and to provide a comparison result.

17. (Original) The computer program product as recited in claim 16 wherein the comparison result is used to determine an identity of the remote communication device.

18. (Original) The computer program product as recited in claim 16, wherein the at least one computer readable medium is selected from the set of a disk, tape or other magnetic, optical, or electronic storage medium and a network, wireline, wireless or other communications medium.

19. (Original) The computer program product as recited in claim 16 further comprising an instruction sequence executable to enable a communication feature according to the comparison result to thereby better communicate with the remote communication device.

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20. (Original) The computer program product as recited in claim 19 wherein the remote communication device is a digital modem and the feature is a request for spectral shaping by an analog modem.

21. (Original) The computer program product as recited in claim 16 wherein the computer program product is executable on a device having communication capability and which is coupled to the remote communication device.

22. (Original) The computer program product as recited in claim 16 further comprising an instruction sequence executable to enable at least one of a performance enhancing or deficiency compensation feature according to the identification of the remote communication device.

23. (Original) The computer program product as recited in claim 16 wherein duration of one or more training signals are the one or more characteristics and wherein the second instruction sequence compares the measured duration to stored duration values to identify the remote communication device.

24. (Original) An apparatus comprising:
a device operable to measure one or more parameters associated with one or more signals
sent during a communication session with a remote communications device;
storage elements containing known one or more parameters associated with one or more
known communication devices; and
wherein the device is operable to compare the measured one or more parameters of the
one or more signals to the stored one or more parameters of known devices.

25. (Original) The apparatus as recited in claim 24 further comprising enabling one or more performance enhancing or deficiency compensation features according to the compare of the measured one or more parameters.

26. (Original) The apparatus as recited in claim 24 wherein comparing the measured one or more parameters is used to determine an identity of the remote communications device.

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27. (Original) The apparatus as recited in claim 24 wherein the one or more signals are sent during at least one of transceiver training and channel analysis.

28. (Original) The apparatus as recited in claim 24 wherein the one or more parameters is the number of symbols sent.

29. (Original) The apparatus as recited in claim 24 wherein the device is a modem.

30. (Original) The apparatus as recited in claim 24 wherein the signals are training signals and the parameters are duration of the training signals.

31. (Currently amended) The apparatus as recited in claim ~~31~~ 30 wherein the training signals are modem training signals TRN_{2d} and TRN_{2d}, the duration of the modem training signals being measured and compared to known durations to determine an identity of the remote communications device.

32. (Original) The apparatus as recited in claim 24 wherein the apparatus is disposed on a single integrated circuit.

33. (Original) The apparatus as recited in claim 24 wherein the apparatus includes a general purpose processor.

34. (New) A method comprising:

evaluating one or more characteristics associated with one or more signals sent by a
    remote communication device to a local communication device, the signals being
    sent according to a communication protocol allowing variability in the one or
    more characteristics, as amongst implementations of the communication protocol;
    and

comparing the evaluated one or more characteristics to characteristics of signals sent by
    known devices, wherein the local communication device performs the evaluating
    by measuring a duration of one or more training signals, duration of the one or

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more training signals corresponding to one or more characteristics of the one or more signals sent by the remote communication device.

35. (New)   The method as recited in claim 34 wherein the identity of the remote communication device is determined according to at least one of brand, type or model.

36. (New)   The method as recited in claim 34 further comprising enabling a communication feature according to the comparing of the evaluated one or more characteristics to thereby better communicate with the remote communication device.

37. (New)   The method as recited in claim 36 wherein the remote communication device includes a digital modem and the communication feature is a request for spectral shaping by an analog modem.

38. (New) The method as recited in claim 34 wherein the remote communication device includes one of a digital modem and analog modem.

39 (New)   The method as recited in claim 34 wherein the evaluating is performed in a first communication device operating as a modem in accordance with ITU-T Recommendation V.90.

40. (New)   The method as recited in claim 34 further comprising enabling one or more performance enhancing or deficiency compensation features according to the comparing of the evaluated one or more characteristics.

41 (New) The method as recited in claim 34 wherein the training signals are modem training signals TRN_{1d} and TRN_{2d} and the duration of the modem training signals are measured and wherein during the comparing, the measured duration is compared to stored duration values to identify the remote communication device.

42. (New) The method as recited in claim 34 wherein the duration is measured in terms of a number of symbols transmitted.

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43. (New) A computer program product encoded in at least one computer readable medium, comprising:

a first instruction sequence executable to evaluate one or more characteristics associated with signals sent by a remote communication device; and

a second instruction sequence executable to compare the evaluated one or more characteristics to stored characteristics of known communication devices and to provide a comparison result, wherein duration of one or more training signals correspond to the one or more characteristics and wherein the second instruction sequence compares the measured duration to stored duration values to identify a remote communication device.

44. (New)   The computer program product as recited in claim 43, wherein the at least one computer readable medium is selected from the set of a disk, tape or other magnetic, optical, or electronic storage medium and a network, wireline, wireless or other communications medium.

45. (New)   The computer program product as recited in claim 43 further comprising an instruction sequence executable to enable a communication feature according to the comparison result to thereby better communicate with the remote communication device.

46. (New) The computer program product as recited in claim 45 wherein the remote communication device is a digital modem and the feature is a request for spectral shaping by an analog modem.

47. (New) The computer program product as recited in claim 43 wherein the computer program product is executable on a device having communication capability and which is coupled to the remote communication device.

48. (New) The computer program product as recited in claim 43 further comprising an instruction sequence executable to enable at least one of a performance enhancing or deficiency compensation feature according to the identification of the remote communication device.

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49. (New)   The computer program product as recited in claim 43 wherein duration of one or more training signals correspond to the one or more characteristics and wherein the second instruction sequence compares the measured duration to stored duration values to identify the remote communication device.

50 (New) An apparatus comprising:
a device operable to measure one or more parameters associated with one or more signals
sent during a communication session with a remote communications device,
wherein the one or more signals include training signals and wherein the one or
more parameters include duration of the training signals; and
storage elements containing known one or more parameters associated with one or more
known communication devices, wherein the device is operable to compare the
measured one or more parameters of the one or more signals to the stored one or
more parameters of known devices.

51. (New) The apparatus as recited in claim 50 further comprising enabling one or more performance enhancing or deficiency compensation features according to the compare of the measured one or more parameters.

52. (New) The apparatus as recited in claim 50 wherein comparing the measured one or more parameters is used to determine an identity of the remote communications device.

53. (New) The apparatus as recited in claim 50 wherein the one or more parameters include the number of symbols sent.

54. (New) The apparatus as recited in claim 50 wherein the device is a modem.

55. (New) The apparatus as recited in claim 50 wherein the training signals are modem training signals TRN_{1d} and TRN_{2d}, the duration of the modem training signals being measured and compared to known durations to determine an identity of the remote communications device.